

### **DETAILED ACTION**

1. This communication is responsive to Amendments filed on 09/12/2007 and 01/11/08.

As a result of the amendments, claim 11 has been amended. Claims 11-19 are pending in the application.

#### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

3. The informal drawings Fig. 1, and Fig. 4 submitted on 08/27/03 are not sufficient quality, therefore, new corrected drawings in compliance with 37 CFR 1.121(d) are required in this application. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings.

The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### **EXAMINER'S AMENDMENT**

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's representative, Mr. Chris Communtzis (Reg. # 31,097), on March 14, 2008.

The application has been amended as follows:

#### **AMENDMENTS TO THE CLAIMS:**

- **Cancel claims 12, 13, 14**
- **Claim 11 has been amended as:**

Apparatus for accessing a semi-structured database in accordance with an input request for information, wherein the semi-structured database comprises a plurality of items, each item comprising one or more fields having a plurality of characters therein, at least one of the fields being a free text field, the apparatus comprising:

a processor;

means for accessing a data store comprising a plurality of index entries, each index entry representing a concordance between an entry in a field of an

item in the semi-structured database and that item in the semi-structured database;

input means for receiving a request for information, the request comprising a natural language phrase;

a parser for parsing the received request to determine components of the request;

a slot filler for generating a slot-and-filler request having a plurality of slots, each slot corresponding to a group of index entries in said data store, the slot-filler being arranged to identify, one or more object components representing an object of the received request from the parsed request, and allocate at least one object component to a respective slot of a slot-and-filler request; and

a query constructor for accessing the data store, wherein the query constructor is arranged to compare the or each allocated object component in the slot-and-filler request with a group of index entries in said data store corresponding to the slot of the allocated component, so as to identify an index entry corresponding thereto, and to use the identified index entry to identify a corresponding item in the semi-structured database;

an index generator comprising a processor arranged, in respect of each item in the semi-structured database, to analyze each field in accordance with a predetermined criterion so as to identify an entry within said field, and to generate at least one index entry representing a concordance between an

identified entry and the item corresponding to the identified entry, and store the generated index entry in the data store;

wherein for each of a plurality of predetermined formats, the processor is arranged to search said free text field to identify a sequence of characters having a format corresponding to the predetermined format, said identified sequence of characters being deemed to constitute an identified entry;

wherein for the free text field, the processor is arranged to define any data not identified as an entry as a free text entry;

wherein the free text entry comprises at least one free text word defined by a sequence of alphanumeric characters, the processor being arranged to identify at least one selected free text word for a field by comparing the free text entry with at least one selection criterion defining one or more predetermined characteristics of a selected free text word.

### ***Reasons for Allowance***

5. Claims 11, 15-19 are allowed, now renumbered as 1-6.
6. The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to apparatus that performs search requests on a semi-structured database by processing a user's natural language phrase to obtain components which are allocated to slots in a slot and filler request which then become the search terms used to access the database via an index store. (Applicant's Remarks, page 8, lines 15-18).

**Claim 11** recites, or similarly recites, in combination with the remaining elements, apparatus comprising:

*a slot filler for generating a slot-and-filler request having a plurality of slots, each slot corresponding to a group of index entries in said data store, the slot-filler being arranged to identify, one or more object components representing an object of the received request from the parsed request, and allocate at least one object component to a respective slot of a slot-and-filler request;*

*wherein the free text entry comprises at least one free text word defined by a sequence of alphanumeric characters, the processor being arranged to identify at least one selected free text word for a field by comparing the free text entry with at least one selection criterion defining one or more predetermined characteristics of a selected free text word.*

The closest prior art, Robertson et al. (U.S. Pat. No. 6,216,123) shows a substantially similar method and system for generating and searching a full text index (Abstract). While Robertson discloses a method and system for quickly and efficiently processing search requests against a full text index, Robertson fails to suggest the

claimed limitations slot and filler request, as recited in claim 11. In addition, Kirsch et al. (U.S. Pat. No. 5,983,216) discloses an analogous method and system of performing effective document searches over multiple, independent document collections; however, Robertson et al. and Kirsch et al., singularly or in combination, still fail to anticipate or render the above cited limitations obvious.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (571) 272-4112. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham, can be reached on (571) 272-7079. The fax number to this Art Unit is (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should

Art Unit: 2167

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Miranda Le/  
Primary Examiner, Art Unit 2167